Automation Exercise Project

Software Requirements Specification

1.0

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Prepared for
AutomationExercise.com

Contents

1. Introduction

This document provides the Software Requirements Specification (SRS) for the **Automation Exercise website**, detailing its functionalities, performance, and testability aspects.

1.1 Purpose

This document defines the functional, non-functional, and interface requirements for the Automation Exercise E-Commerce System. The system allows users to browse products, add them to a cart, complete purchases, track orders, and manage their accounts. The SRS ensures that the development, testing, and implementation meet the expected business objectives.

1.2 Scope

The **Automation Exercise E-Commerce System** is an online shopping platform where users can:
- **Register and log in** to manage accounts securely.
- **Browse, search, and filter products** based on categories and brands.
- **Add products to a shopping cart and proceed to checkout.**
- **Select payment methods** and complete purchases securely.
- **Track orders** and view order history.
- **Use APIs** for third-party integrations (e.g., mobile app, analytics, automation).

1.3 Definitions, Acronyms, and Abbreviations

Abbreviation	Word
SRS	Software Requirements Specification
API	Application Programming Interface
UI	User Interface

1.4 References
- Automation Exercise Website

2. Overall Description

2.1 Product Perspective

This system is a **fully functional e-commerce platform** that enables users to browse products, make purchases, and track orders. It also includes API testing capabilities for external integrations.

2.2 Product Functions

- **User Authentication**: Secure registration, login, password reset.
- **Product Catalog**: Browse, search, and filter products.
- **Cart & Checkout**: Add/remove/update items and proceed to checkout.
- **Payment Processing**: Secure transactions via various payment methods.
- **Order Management**: Track orders and view invoices.

2.3 User Characteristics

- **Customers**: Browse products, make purchases, track orders.
- **Administrators**: Manage inventory, process orders, and handle customer support.

2.4 Constraints

- The system must support at least 1,000 concurrent users.
- Payment transactions must comply with PCI-DSS standards.

3. Specific Requirements

The Automation Exercise Project will have 1 roles

- Customer

3.1 Functional Requirements

- User Management

Module Name	Applicable Roles	Description
User Registration	Customer	Users shall be able to register using name, email, and password.
User Login & Logout	Customer	Users shall be able to log in and log out securely and the page could remember its account.

- Product Management

Module Name	Applicable Roles	Description
View Products	Customer	Customers shall be able to view all available products on the Product Page.
Search Products	Customer	Customers shall be able to search for products by name or Product Code.
Filter Products	Customer	Customers shall be able to filter products by category and brand.
Product Recommendation	Customer	**Real-time Recommendation Updates** • The system shall dynamically update product recommendations in real-time based on the user's interactions with recommended products. **Category-based Filtering** • When the user applies a category filter to recommendations, the system shall restrict displayed recommendations to products within the selected category. **Brand-based Filtering** • When the user applies a brand filter to recommendations, the system shall restrict displayed recommendations to products from the selected brand.
View Product Details	Customer	Each product page shall display product images, descriptions, and stock availability.

- Shopping & Checkout

Module Name	Applicable Roles	Description
Add to Cart	Customer	Customers shall be able to add products to their shopping cart.
Remove from Cart	Customer	Customers shall be able to remove items from the cart.
View Cart Summary	Customer	The system shall display total price before checkout.
Save Cart For later	Customer	- The system shall retain items in the cart even if the user logs out. - The system shall notify users if a saved item is out of stock. - The system shall ensure that saved items persist across multiple user sessions until manually removed or purchased.
Checkout Process	Customer	Customers shall be able to proceed to checkout and enter shipping details. Customers cannot be able to proceed to checkout if they aren't logged in
Payment	Customer	**Name on Card Validation** - The system shall ensure that the "Name on Card" field is not left blank. - The system shall restrict the "Name on Card" field from containing special characters. - The system shall restrict the "Name on Card" field from containing numbers. **Card Number Validation** - The system shall ensure that the "Card Number" field is not left blank. - The system shall allow only numeric values in the "Card Number" field. - The system shall validate the card number format and ensure it is a valid card number. **CVC (Card Verification Code) Validation** - The system shall ensure that the "CVC" field is not left blank. - The system shall allow only numeric values in the "CVC" field. - The system shall ensure that the CVC consists of either 3 or 4 digits. **Expiration Date Validation** - The system shall ensure that both the "Month" and "Year" fields are not left blank. - The system shall validate that the "Month" field contains a value between 01 and 12. - The system shall ensure that the "Year" field contains a future date

3.2 External Interface Requirements

3.2.1 User Interfaces

- **Homepage:** Showcases products, search bar, user login section.
- **Product Page:** Displays a full list of products with filtering options.
- **Cart Page:** Displays selected items, quantity, and checkout button.
- **Test Cases Page:** Provides a list of predefined test cases for QA purposes.
- **API Testing Page:** Offers an API testing environment to validate endpoints.

3.2.2 Hardware Interfaces

None

3.2.3 Software Interfaces

None

3.2.4 Communications Interfaces

None

3.3 Front End Details

This section describes the Front end of Automation Exercise.
It also lists a few use cases to describe the functioning of the system

Following is a list of module wise fields

User Signup
- Name
- Email Address
- Signup

User Signup information
- Title
- Name
- Email Address
- Password
- Date of Birth
- First Name
- Last Name
- Company
- Address
- Address 2
- Country
- State
- Zip code

- Mobile number
- Create Account

User Login
- Email Address
- Password
- Login

Products page
- Search product
- Category Filtration
- Brands Filtration
- Search button
- Recommendation
- Reset

View Product Detail
- Name
- Email Address
- Review
- Quantity
- Add to cart
- Submit

Cart Page
- Remove product button for every product
- Check out
- Reset

Checkout
- Billing address
- Delivery address
- Review Order
- Comment Field
- Place Order Button

Test Cases page
- list of test Cases

API Testing page
- list of APIs

Contact us page
- Name
- Email
- Subject
- Feedback
- Attachment
- Submit

Subscription
- Email
- Subscribe Button

3.4 Technical Requirements

User Signup
T1 Customer Name: Customer Name is required
T2 Customer Name: Special characters are not allowed
T3 Customer Name: Numbers are not allowed
T4 Email: Email ID must not be blank
T5 Email: Email ID must be valid
T6 Email: Email ID cannot be Exist

User Signup Information
T7 Title: chose from 2 option
T8 Title: Title is required
T9 Customer Name: Customer Name is required
T10 Customer Name: Special characters are not allowed
T11 Customer Name: Numbers are not allowed
T12 Email: Email ID Entered in signup can't be changed
T13 Password: Password must not be blank
T14 Password: Password must contain at least 8 characters
T15 Password: Must include at least one uppercase letter, one number, and one special character
T16 Date of Birth: Date of Birth is required
T17 Day: User must select a valid day (1-31)
T18 Month: User must select a valid month
T19 Year: User must select a valid year from the dropdown.
T20 Date of Birth: System should not allow selecting an invalid date (e.g., February 30).
T21 First Name: Field must not be blank
T22 First Name: Special characters are not allowed
T23 First Name: Numbers are not allowed
T24 Last Name: Field must not be blank
T25 Last Name: Special characters are not allowed
T26 Last Name: Numbers are not allowed
T27 Company: Special characters are not allowed.
T28 Company: Field must not be blank
T29 Address: Field must not be blank

T30 Country: User must select a country from the dropdown
T31 Country: User cannot proceed without selecting a valid country.
T32 State: Field must not be blank
T33 State: Numbers are not allowed.
T34 State: Special characters are not allowed.
T35 City: Field must not be blank
T36 City: Special characters are not allowed
T37 City: Numbers are not allowed
T38 Zipcode: Field must not be blank
T39 Zipcode: Must contain only numbers
T40 Zipcode: Must have the correct number of digits
T41 Mobile Number: Field must not be blank
T42 Mobile Number: Must contain only numbers
T43 Mobile Number: Must have the correct number of digits (10 digits).

User Login
T44 Email: Email ID must not be blank
T45 Email: Email ID must be valid
T46 Email: Email ID must be Exist
T47 Password: Password must not be blank
T48 Password: Password field must be masked (hidden characters)
T49 User Login: If incorrect credentials are entered, an error message must be displayed
T50 User Logout: User session must be cleared upon logout
T51 User Remember: When the user logs in again, the system must auto-fill the saved email and password.

Products page
T52 Products: Must be displayed with an image, name and price
T53 Search: Users must be able to search for products using a keyword
T54 Search: Results must be relevant and sorted by relevance
T55 Search: Field must not be blank
T56 Filter: Users must be able to filter products by category and brand
T57 Add to cart: Add to Cart button must be visible and enabled

Product Details
T58 Product: Must display a larger image, description, and reviews
T59 Product: Users must be able to select product quantity before adding to cart
T60 Product: Add to Cart button must be visible
T61 Product: Users must be able to write and submit a product review with their name and email
T62 Customer Name: Customer Name is required
T63 Email: Email ID must not be blank
T64 Email: Email ID must be valid
T65 Review: Must not be empty
Shopping Cart
T66 Cart: Users must be able to add/remove items from the cart
T67 Cart: Product quantity must be adjustable
T68 Cart: Total price must be updated dynamically

Check out
T69 Checkout Page: Must display both the Delivery Address and Billing Address
T70 Checkout Page: Users must be able to review their order details before placing an order
T71 Checkout Page: Product details must include name, category, price, quantity, and total amount
T72 Checkout Page: Users must be able to edit the quantity of products before placing an order
T73 Checkout Page: A field must be available for users to add comments about their order
T74 Checkout Page: The Place Order button must be visible and enabled when the order is valid

Payment
T75 Name on Card: Field must not be blank
T76 Name on Card: Special characters are not allowed
T77 Name on Card: Numbers are not allowed
T78 Card Number: Field must not be blank
T79 Card Number: Only Numbers are allowed
T80 Card Number: Must be a valid card number
T81 CVC: Field must not be blank
T82 CVC: Only Numbers are allowed
T83 CVC: Must be a 3-digit or 4-digit number
T84 Expiration Date: Month and Year fields must not be blank
T85 Expiration Date: Month must be between 01 and 12
T86 Expiration Date: Year must be in the future
T87 Payment: System must validate card details before processing
T88 Payment: System must display an error message for invalid details

Subscription
T89 Email: Email ID must not be blank
T90 Email: Email ID must be valid
T91 Subscription button: The Subscription button must be visible and enabled

Contact us
T92 Name: Field must not be blank
T93 Name: Special characters are not allowed
T94 Name: Numbers are not allowed
T95 Email: Email ID must not be blank
T96 Email: Email ID must be valid
T97 Subject: Field must not be blank
T98 Feedback: Field must not be blank
T99 Attachment: Field must not be blank